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Control of glow discharge parameters using transverse supersonic gas flow - Numerical experiment

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Abstract

© Published under licence by IOP Publishing Ltd. A low pressure glow discharge in a transverse supersonic gas flow was studied by numerical modelling for the case where the flow only partially fills the interelectrode gap. It's shown that by organizing a supersonic gas flow in a limited region of the interelectrode space can be controlled combustion conditions of the glow discharge, and its parameters. It is shown that it is possible to achieve stable combustion glow discharge at low and superlow pressures, when the parameter pL lies on the left branch of the Paschen curve.

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